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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/905,286	07/13/2001	Cem Basceri	MI22-1724	3892

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EXAMINER	
FULLER, ERIC B	

ART UNIT	PAPER NUMBER
1762	

DATE MAILED: 02/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/905,286	BASCERI ET AL.	
	Examiner	Art Unit	
	Eric B Fuller	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 November 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,6-8,11-22 and 24-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6-8,11-22 and 24-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 11-22, 24, and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Senzaki et al. (US 6,238,734 B1) in view of Kang (US 6,127,218).

Senzaki teaches a method for producing mixed metal compound layers on substrates such as integrated circuits (abstract; column 5, lines 5-10). The layers are deemed to include metal oxide layers comprising barium, strontium, calcium, and titanium, among others (column 3, line 57; column 4, lines 15-25). These metals are provided to a chemical vapor deposition reactor in the form of precursors under conditions effective to deposit a BST layer. Suitable oxidizers that are supplied to the reactor are oxygen, ozone, nitrous oxide, nitric oxide, nitrogen dioxide, water, hydrogen peroxide, air, and mixtures thereof (column 3, lines 40-43). The precursors are taught (column 4, lines 31-57). The reference fails to teach utilizing the flowing of water or hydrogen peroxide to control the amount of titanate in the film.

However, Kang teaches that the relative flow rates of the oxidizers alter the strontium to titanium ratio that is deposited (column 5, lines 10-15). It is within the knowledge of one practicing in the art to recognize that the relative flow rate of one

oxidizer depends on the flow rates of all the oxidizers. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to control the amount of titanate in the film by controlling the flow rates of the oxidizers (including water and hydrogen peroxide). By doing so, the desired strontium to titanate ratio is achieved.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3, 6-8, 11-22, and 24-31 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3, 10, and 11 of U.S. Patent No. 6,566,147. Although the conflicting claims are not identical, they are not patentably distinct from each other because by performing the methods of claims 1-3, 6-8, 11-22, and 24-31 of the present applicant, the limitations of claims 1, 3, 10, and 11 of the previously filed application would be infringed. Differences that the present application has, such as simultaneously flowing the

precursors, would have been obvious at the time the invention was made to a person having ordinary skill in the art.

Claims 1-3, 6-8, 11-22, and 24-31 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 17, 52, and 60 of copending Application No. 09/905,320 in view of Senzaki et al. (US 6,238,734 B1).

Claims 1, 17, 52, and 60 of the copending application teach the limitations of the present applicant. The claims of the copending applicant are silent to the oxidizers that are used. However, Senzaki teaches that suitable oxidizers that are supplied to the reactor are oxygen, ozone, nitrous oxide, nitric oxide, nitrogen dioxide, water, hydrogen peroxide, air, and mixtures thereof (column 3, lines 40-43). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize the oxidizers taught by Senzaki in the process taught in the claims of the copending application. By doing so, one would have a reasonable expectation of success, as both references are concerned with depositing barium, strontium, and titanate comprising dielectric layers by CVD.

This is a provisional obviousness-type double patenting rejection.

Response to Arguments

Applicant argues that the rejections of the previous action fail to teach or make obvious the claims, as they have now been amended. Examiner agrees and has

withdrawn the rejections accordingly. The applicant's arguments are moot in view of the new grounds of rejection. Specifically, claims 11 and 18 do not require that the amount of titanate be changed, just controlled. Kang teaches that the amount of titanate is dependent on the relative flow of the oxidizers. Therefore, it would have been obvious to control the flow of all the oxidizers taught by Senzaki, including water and peroxide, in order to control the amount of titanate in the film.

Conclusion

Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B Fuller whose telephone number is (571) 272-1420. The examiner can normally be reached on Mondays through Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P Beck, can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EBF

TIMOTHY MEEKS
PRIMARY EXAMINER